

Supporting community-based natural resource management in pastoralist societies in East Africa to achieve the UN Sustainable Development Goals



Photo credit: Kieran Avery, Northern Rangelands Trust



SUMMARY

Sustainable pastoralism provides a wide range of economic, social and ecological value. However, the sustainability of this global food system has been undermined by systemic low investment.¹ The effects of inappropriate development policies, growing population pressure and escalating economic inequalities are all being exacerbated by the increasing climate variability over the past decades.

In recent years, community-based natural resource management (CBNRM) has emerged as a potential solution to these challenges. Rangeland areas may be managed more effectively by enabling communities to develop more sustainable livestock practices, restore the quality of rangelands and ecosystem services, improve the quality and market value of livestock, and ultimately aim to increase food security while reducing social inequalities. Such community-based management of economically, socially and ecologically important areas of land therefore

addresses at least nine Sustainable Development Goals (SDGs).

Here, we outline the challenges facing pastoral systems, how CBNRM provides a potential solution, and the link between pastoral CBNRM and the SDGs. Our collaborative and interdisciplinary research network aims to provide context-driven evidence for pastoral CBNRM that will ultimately underpin co-designed sustainable land management strategies.

“Pastoralism and rangelands are globally significant, but under-recognised and undervalued.”²



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PASTORALISM: SUPPORTING LIVELIHOODS IN DRY AND VARIABLE ECOSYSTEMS



Pastoralism – the extensive grazing of domestic livestock in the rangelands – is practiced across approximately one quarter of the world's surface in many diverse countries spanning six continents, and supports hundreds of millions of people.^{1,2} In East Africa, indigenous ecological knowledge and cultural practices have enabled pastoralists to live in regions where rain-fed crop production is marginal or has been impossible for millennia.^{1–3} Pastoralism is an efficient method for producing food and creating livelihoods in dry and highly variable natural ecosystems⁴. When practiced sustainably, pastoralism helps create healthy grasslands that provide ecosystem services, including a home to wildlife that supports high-end tourism business. Pastoral systems therefore play a key role in both generating revenue from arid areas and safeguarding natural capital.

In modern times, pastoralist ways of life have faced increasing challenges. Customary practices and resource management systems have been eroded by inappropriate development policies and weak land governance systems, and historically pastoralist societies have often been marginalised or excluded from the political process.^{1–5} For example, sustainable pastoralism often requires livestock to be moved over large distances in order to track intra- and inter-annual variability in suitable pasture⁵. Yet such practices are hampered by the historical designation of land


to particular ethnic groups, land appropriation, and the promotion of private land tenure⁶ over more communal forms of ownership and access. This leads to fragmentation of the landscape. Population increases,⁷ in conjunction with agricultural intensification, have further contributed to soil degradation and reduced pasture availability.⁸ Additionally, climate change is exacerbating these issues – drought, floods and extreme temperatures cause deaths of livestock, which directly undermines the production capital of pastoralists.^{9,10} The search for suitable pastures in the context of increased unpredictability in annual rainfall and temperatures has led to conflict over access to grazing land. Together with poor food security and increasing environmental risks, these conflicts threaten pastoralist livelihoods and negatively impact the ecosystems that high-end tourism is based on, thereby jeopardising national economies. Due to the large scale over which some species need to move and the need for pastoralists to access pasture to maintain their livelihoods, attempts to protect the natural capital of the grasslands cannot rely solely on the creation of protected areas. Approximately 65%¹¹ of Kenya's wildlife live in community and private lands and conservation efforts in these areas are required to complement national parks and reserves in a manner that also benefits pastoralist communities.

The Sustainable Development Goals (SDGs) are a collection of 17 goals set by the United Nations that outline a blueprint for achieving a better and more sustainable future for all. The SDGs recognise that ending poverty is interconnected with addressing other global challenges facing people and the planet.

COMMUNITY-BASED GOVERNANCE: AN ADAPTIVE STRATEGY TO SUSTAINABLE LAND MANAGEMENT

Community-based natural resource management (CBNRM) provides a potential solution to the challenges outlined above. CBNRM seeks to align sustainable management and conservation goals with economic benefits and improved living standards for local communities^{12–13}. Placing communities at the heart of this management system can help harness indigenous knowledge and experience, integrating it with modern information and new technologies to enable novel responses and adaptations that are required under 21st century conditions such as climate change. CBNRM also helps ensure that the interests and views of local people are reflected in decision-making processes, and crucially can ensure motivation to cooperate.¹⁴ Empowered communities may more easily work with formal government structures and can tap into external networks of resources (e.g. funding, tourism, markets) and thus avoid delays or lack of provision that may occur when management is controlled only through larger and more bureaucratic organisations (government or big NGOs).

CBNRM is undertaken in varying ways with various labels. However, CBNRM commonly includes participatory approaches and the creation of a new, or strengthening of an already existing, community organisation.¹⁵ This community organisation establishes its own institutional rules about how the area is governed, including decisions on land management practices, which take place against the background of stakeholders' traditional institutions and cultural norms. In Kenya, pastoral communities have established rangeland conservancies, which aim to manage rangeland areas and conserve wildlife more effectively by enabling communities to develop more sustainable livestock practices.¹⁶ The goal is to improve subsistence livelihoods and food security, and to generate income through tourism and trade in a way that local communities can potentially benefit from more directly.



“ Development in pastoral areas worldwide falls far behind that of other communities, creating poverty and vulnerability that undermine the sustainability of the system.¹ ”

THE NORTHERN RANGELANDS TRUST IN KENYA

The Northern Rangelands Trust (NRT) is a community conservancy membership organisation that champions a new approach to land management, conservation and development. NRT was a founding member of the Kenya Wildlife Conservancies Association (KWCA), which is a representative body for private and community conservancies across Kenya.

The NRT's mission is to develop resilient community conservancies across northern and coastal Kenya by helping them build a sustainable future. In 2018, the NRT supported 39 communities across a combined 42,000 km² to:

- Increase average **governance score** for conservancies from 67% in 2017 to 70%
- Increase income **generated by tourism** by 31% to Ksh. 86 million (US\$ 860,000)
- Decrease the number of lives lost in **security incidents** by 74%
- Decrease the number of **elephants poached for ivory** between 2012 and 2018 by 97%

The economic, social and ecological successes of the NRT model highlights the benefits of a landscape-approach that focuses on supporting a wider conservancy system.

As well as improving security and the management of rangelands and wildlife, conservancies provide their constituents with access to jobs, better services for community development and more business opportunities. The NRT helps to support sustainable businesses within the NRT conservancies through:

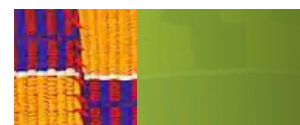
- **NRT Trading (NRTT)** – is a social enterprise owned by NRT that aims to build resilient commercial activity by engaging with conservation-linked businesses and conservancy-based business (e.g. tourism). NRTT also works with the Nabulu Economic Empowerment Programme

and the Northern Rangelands Savings and Credit Cooperative (SACCO) to support group and individual enterprises through skill development and access to finance and mentoring. NRTT is the umbrella organisation for BeadWORKS and LivestockWORKS, outlined below.

- **BeadWORKS** – partners with established women's groups in conservancies to help them turn their traditional craft skills into a viable, sustainable business. In a landscape where women struggle to access education and move beyond traditional household roles, the women of BeadWORKS are challenging norms, inspiring others and becoming entrepreneurs in their own right. There are currently 1300 women participating in BeadWORKS, benefiting over 7,500 people and generating over US\$ 200000 per year in sales.
- **LivestockWORKS** – aims to incentivise sustainable rangelands management by linking pastoralists to cattle markets. LivestockWORKS purchase cattle directly from pastoralists and sell to markets on their behalf. LivestockWORKS is also working with conservancies to build up fodder banks for supplementary feed in times of low rainfall.

For further information, please see the NRT's *State of Conservancies Report 2018*, *BeadWORKS Kenya Impact Report 2019*, and *Half Year Report Jan-June 2019*, all available from www.nrt-kenya.org.

ADDRESSING SEVERAL SDGs THROUGH COMMUNITY-BASED GOVERNANCE



By supporting community-based governance in pastoral systems, several diverse yet interconnected SDGs are addressed.

At the heart of pastoral CBNRM is supporting **Life on Land** and protecting the environment by: conserving ecosystems and their services, restoring degraded land and restoring the quality of rangelands, building ecosystem resilience, and protecting biodiversity and threatened species. This provides a foundation to meet the goal of **Zero Hunger** by providing food security and improved nutrition through promoting sustainable land and pasture management, improvements in the quality of livestock, and developing food systems that are resilient to climate change. Improved pastoral systems can provide the basis for the goals of **No Poverty** and **Decent Work and Economic Growth** that is inclusive and sustainable by: enhancing access to information on livestock markets and improving the market value of livestock, enabling money to be generated via enterprises such as ecotourism and local crafts (including direct employment), accessing payments for ecosystem services and carbon credits, and securing land tenure rights. Underpinning effective management of the rangelands is the need to support strong and sustainable systems

of governance, make decision-making more responsive, participatory and representative, and facilitate peaceful relationships between neighbours (the goal of **Peace, Justice and Strong Institutions**).

Addressing these issues is not possible without promoting **Gender equality** (empowering women through equal access to resources and inclusion in decision-making processes) and **Quality Education** (effective governance will be enhanced by increased knowledge and human capital, while proceeds from resources can be channelled into improving education). By enabling communities to have more influence over the management of their resources, CBNRM supports initiatives such as investing in health care facilities (the goal of **Good Health and Wellbeing**), or improving water infrastructure and access to safe drinking water (the goal of **Clean water and sanitation**). Additionally, self-governed communities develop stronger cohesion, which has been demonstrated to be linked to stronger wellbeing and resilience through availability of social support.



LOOKING FORWARD: WORKING COLLABORATIVELY TO DEVELOP CONTEXT-DRIVEN RESEARCH AND POLICY IN PASTORALIST SYSTEMS



Despite the success of some community-based conservancies, there is a great deal of variation both in the willingness of pastoral groups to establish conservancies, and in the effectiveness and inclusiveness of governance in those conservancies that have been established.¹⁷ The issue at the heart of effectively governing and managing food systems that are based on the effective use of natural resources is understanding how groups come together to cooperate effectively and use their resources in a sustainable manner without succumbing to the “tragedy of the commons”. Addressing these issues requires an interdisciplinary approach and an integrated understanding of the role of ecological and group processes, as well as social institutions, in management of resources, the cultural and psychological factors that lead to positive behaviour change, and the economic policies shaping land use.

CBNRM approaches have been employed in a wide range of resource management systems, including fisheries, forestry, settled agriculture and livestock pastoralism. These different resources need to be managed at different scales. For example, pastoral systems are characterised by flexibility and reciprocity, with the variable nature of rangeland resources means that traditionally groups may move around a lot and rights of access to water or pasture may be emphasised over ownership per se. This presents a situation where boundaries may be flexible or porous, which is different to other resource management such as settled agriculture where there are well-established boundaries and group memberships.

An important consequence of this is that even established and well-organised conservancies can become victims of their own success.

Well-managed pasture or land set aside for conservation and tourism can become attractive to groups outside the conservancy system who may feel they have customary or historical rights to access that land when times are challenging elsewhere. Furthermore, due to the scale at which wildlife sometimes need to move across the landscape, there is also an issue around how to fairly allocate the benefits that come from such natural capital. For example, a particular conservancy may benefit from tourism generated by the presence of elephants on their land at certain times of the year. Yet those same elephants may migrate over large distances and use land in other regions, potentially even coming into conflict with communities in other areas. There is therefore a need to understand how traditional approaches to land use can be reconciled with modern property rights systems so that land tenure can be strengthened in a manner that is suitable for supporting and promoting community-based governance of rangelands, reducing the potential for conflict. A greater understanding of how to manage rangelands more effectively can come from taking a cultural landscape approach – which seeks to understand the multiple levels and scales that exist in the ecological processes and patterns of use of rangelands, and the diverse cultures and institutions for managing these resources. Importantly such an approach seeks to understand how behaviour and practices at one-level can impact outcomes at other levels.

Researching pastoral CBNRM can therefore help to address the distinct management challenges (including benefit sharing) raised by systems that have flexible social boundaries and wide-ranging mobility across the landscape, and how these dynamics are impacted by external pressures.

Much existing work about collective management of natural resources has been conducted in non-pastoralist societies. Understanding to what extent the design principles of sustainable resource management that have been identified in previous research¹⁸ apply to pastoralist societies is an important area of future research. A better understanding of how the social and ecological context of pastoralist societies affects cooperation between individuals and groups can help generate practical suggestions for strengthening conservancies.

Our collaborative network

Our collaborative and interdisciplinary research network aims to co-create reflective and context-driven evidence for pastoral CBNRM that will ultimately underpin co-designed sustainable land management strategies. Engaging both pastoralist communities and policymakers to devise more

contextually-driven policy can help to create policy frameworks that work with rather than against pastoral systems. Successfully achieving the SDGs requires engagement with both national and local decision-makers to ensure evidence informs the creation, implementation, and monitoring of SDG-related policy.

Our interdisciplinary and collaborative network spans academic researchers, policy practitioners and a pastoralist membership organisation. We encompass a wide range of expertise, including anthropology, community engagement, ecology, economics, knowledge exchange, monitoring and evaluation, policy development and psychology. Our aim is to ensure that our findings can be translated into actionable and evidence-informed recommendations that are tailored for local social, economic and ecological context thus directly addressing the SDGs mentioned above.

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